Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

**Notes Questions for the Unit 7 Notes, Part 1 – Light Reactions of Photosynthesis**

Mrs. Krouse, AP Biology

***Vocabulary:*** *For each of the terms listed below, fill in the definition given in the notes in the second column. In the third column, I may ask an associated question.*

|  |  |  |
| --- | --- | --- |
| **Vocabulary Term and Synonyms** | **Definition(s) Given in the Notes** | **Associated Question** |
| Turgid |  | How does this term relate to the guard cells? |
| Flaccid |  | How does this term relate to the guard cells? |
| Stroma |  | N/A |
| Thylakoid / Granum |  | What is the thylakoid lumen? (defined later in the notes) |
| Photosystem II (P680) and Photosystem I (P700) |  | What do the P680 and P700 refer to? |
| Electrochemical Gradient |  | What is an example of an electrochemical gradient created during the light reactions? |

***Practice Questions:*** *Answer each question below thoroughly and accurately.*

1) What are the reactants and products of photosynthesis?

2) Where are the cells with the highest concentration of chloroplasts found within a plant?

3) What are stomata used for, and where are they located?

4) If a plant could no longer transport K+ into its guard cells, how would this effect the efficiency of oxygen transport into the plant and carbon dioxide transport out of the plant?

5) How are xylem and phloem tissue similar and different? (Make sure to discuss the functions of these tissues!)

6) Where do the light reactions take place within the chloroplast?

7) What is the overall goal of the light reactions?

8) Why do plants appear green?

9) Why are chlorophyll AND accessory pigments used during the light reactions? (Why is chlorophyll not used by itself?)

10) How is water used during the light reactions?

11) Where do the electrons that enter the electron transport chain in the light reactions come from?

12) How is ATP created during the light reactions?

13) What is the final electron acceptor in the electron transport chain of the light reactions?

14) How does cyclic photophosphorylation occur differently than noncyclic photophosphorylation?

15) What is the goal of cyclic photophosphorylation?